

May 23, 2008

Curtis L. Thalken, Colonel
District Engineer
ATTN: Programs and Project Management Division (Mr. Michael Keegan)
696 Virginia Road
Concord, Massachusetts 01742-2751

RE: Draft Supplemental Environmental Impact Statement and State Draft Environmental Impact Report (DSEIS/DEIR) for the Boston Harbor Deep Draft Navigation Improvement Dredging, Boston, Massachusetts (CEQ # 20080143)

Dear Colonel Thalken:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, we have reviewed the U. S. Army Corps of Engineers, New England District (Corps) Draft Supplemental Environmental Impact Statement (DSEIS) for the Boston Harbor Deep Draft Navigation Improvement Dredging project proposed in various areas of Boston Harbor.¹ The DSEIS was prepared by the Corps in partnership with the Massachusetts Port Authority (Massport).

The DSEIS details Massport's goal to establish a deeper channel for access to the Conley Container Terminal in South Boston and to make port improvements in the Mystic and Chelsea Rivers and in the Main Ship Channel above the Reserved Channel. The proposed channel deepening is intended to help reduce tidal delays currently experienced by containerships and bulk carriers that use Boston Harbor. Other anticipated improvements beyond the Corps work to deepen the Federal channels would include work by Massport to deepen vessel berths at the Conley and Marine terminals. The project is expected to generate a total of 12.1 million cubic yards of non-rock dredged material (parent material) and 1.2 million cubic yards of rock.

The DSEIS proposes disposal of the majority of the dredged material at the Massachusetts Bay Disposal Site (MBDS)² and proposes the use of some of the non-rock dredged material (parent material) as cover at the former Industrial Waste Site.³ Based

¹ This letter serves as our comment on the DSEIS and the Draft Environmental Impact Report prepared under the Massachusetts Environmental Policy Act.

² The MBDS is approximately 17 nautical miles east of the entrance to Boston Harbor adjacent to the Stellwagen Bank National Marine Sanctuary.

³ The Industrial Waste Site is located 20 miles east of Boston in 300 ft. of water.

on our review of the information contained in the DSEIS, EPA has no objections to use of the MBDS for disposal of the dredged material. Also, EPA has no objection to the use of parent material as cover at the former Industrial Waste Site, and we view the proposed capping plan as an opportunity to further reduce the remaining risk associated with waste barrels that may still exist at the site.

We focused our review of the DSEIS on air quality impacts, removal of rock in the project area by blasting, and the potential for beneficial reuse of rock material to construct rock reefs. Each of these issues is discussed to varying degrees in the DSEIS. These issues are discussed below and in detail in the attachment to this letter.

The DSEIS describes a range of potential impacts to air quality that are directly related to the type of dredging equipment utilized and the duration of the work, and proposes a multi-year dredging/construction schedule in order to keep annual emissions low enough to avoid triggering the offset requirements of the Clean Air Act general conformity regulations. We are concerned that the DSEIS focuses on avoiding the need to offset emissions without a vigorous examination of the possible cost to the marine environment as a result of lengthening construction schedules to reduce annual emissions. We request that the Corps provide a full analysis of the environmental tradeoffs and costs of avoiding triggering the air emission offsets. In addition, this analysis should include developing contract provisions to require the cleanest construction equipment available and fully consider offsets as a means to reduce the in-water construction time/marine impacts of the project. We are also concerned that as currently written, the DSEIS postpones the determination on the use or viability of emission credits/offsets until the design phase after completion of the NEPA process and Record of Decision. We do not support this approach because we believe the issue should be fully vetted for public review as part of the EIS. We recommend that the Corps work closely with EPA and other interested state and federal stakeholders to resolve this issue in advance of the publication of the FEIS.

In addition to unresolved air issues the DSEIS lacks information to fully describe the potential impacts associated with proposed rock blasting and the creation of rock reefs--a proposed beneficial use of the dredge material. At a May 19, 2008 interagency meeting the Corps reported that the final extent and amounts of the proposed blasting will not be made known until sometime after the Spring of 2009 when extensive borings will be conducted to characterize the type and quantities of the rock to be removed, and that more specific discussions regarding how the material will be removed will not be possible until that point.

We are concerned that there is only limited information in the DSEIS regarding the potential for impacts and whether measures can be implemented to successfully minimize and mitigate blasting impacts, and that the Corps does not intend to fully address this issue until post EIS design and permitting. In addition, we are also concerned that only limited information is included in the DSEIS regarding the establishment of rock reefs, not enough information to inform a decision whether the proposed sites and potential impacts are acceptable. Our comments in the attachment recommend the establishment

of two advisory panels comprised of state and federal stakeholders (and others as appropriate) to address these outstanding issues.

EPA appreciates the opportunity to offer comments on the DSEIS and encourages the Corps to work closely with EPA and other interested federal and state agencies and other stakeholders to develop strategies to effectively address the air and marine impacts associated with the proposed project. We have rated the disposal of the dredged material at the MBDS and capping of the Industrial Waste Site LO-1 “Lack of Objections-Adequate”, in accordance with EPA’s national rating system, a description of which is attached to this letter. Moreover, based on a lack of information relative to the extent and impacts of blasting and the proposal to create rock reefs we have rated those aspects of the EIS EO-2 “Environmental Objections–Insufficient Information.” We look forward to working with the Corps to resolve these issues and suggest a meeting to discuss our comments more fully. Please feel free to contact Timothy Timmermann of the Office of Environmental Review at 617/918-1025 to set up a meeting.

Sincerely,

/s/

Robert W. Varney
Regional Administrator

Attachment

cc:

MEPA Unit

Additional Detailed Comments on the Draft Supplemental Environmental Impact Statement and State Draft Environmental Impact Report (DSEIS/DEIR) for the Boston Harbor Deep Draft Navigation Improvement Dredging, Boston, Massachusetts

Marine Issues

Blasting

According to the DSEIS, the project will result in the removal of between 450,000 and 1,400,000 cubic yards of rock through dredging and blasting. The duration and magnitude of blasting described in the DSEIS is of a scope that has the potential for serious and significant impacts to fish and marine mammals. The DSEIS highlights the multiple fish kills that resulted from blasting performed in Boston Harbor last fall despite the implementation of preventative measures. Based on that experience, we view the blasting as the most significant source of risk for impact to marine organisms associated with the project. While we understand the difficulty of quantitatively predicting impacts from blasting, we believe that significant effort will be required to develop an acceptable plan to minimize the impacts of blasting on the wide range of marine organisms in Boston Harbor. We appreciate the Corps' and Massport's commitment in the DSEIS to work with federal and state agencies to develop approaches to minimize impacts from blasting. In order for this project to move forward, we believe that the Corps and Massport should:

- **Continue their work to establish an interagency underwater technical working group.** We recommend that the Corps work closely with the working group to identify, discuss and evaluate measures that could be implemented to minimize blasting impacts. These measures should include, but not necessarily be limited to, technological fixes, sequencing, time-of-year restrictions, and examination of whether or not the limits of the channel could be shifted as a means to avoid the areas of rock. We strongly encourage the Corps to establish the working group immediately so that the group's work can be incorporated into the FEIS. We also note that the Draft Feasibility Report (page 186) explains that it may be possible to rip (remove) the bedrock with a large toothed bucket mounted on an excavator. According to the analysis, the viability of that alternate removal method (and the overall magnitude of impacts expected from the rock removal component of the project) will not be known until the design phase of the project. We believe that the development of this critical information should proceed now and be presented in the FEIS, not delayed to the design phase of the project outside of the NEPA/MEPA review process. If the development of that information is delayed and information regarding the impacts of rock removal will be developed after the current NEPA process, the Corps should explain how the information will be made available to the agencies and public for review and comment through a supplemental NEPA process. We also recommend that the

working group be maintained throughout the life of the blasting component of the project to help address any unforeseen developments should they arise. As part of the process we recommend that the working group be convened or informed on a regular basis to gauge success of control measures and review project progress (based on the reported results of the monitoring program described below). Rock removal techniques should be revisited as necessary when additional detailed geologic information becomes available.

- **Commit to an extensive monitoring program spanning the entire project life cycle that will provide real-time information on the impacts of blasting.** The monitoring program should be developed in consultation with the working group and should include reporting protocols to explain the chain of events should large fish kills or marine mammal impacts occur as a result of blasting. EPA looks forward to working with the Corps and participating on the working group to help develop the protocols, including those regarding notification of the group following notable events. The working group in conjunction with the Corps and Massport will then explore options for response actions, operational changes, or additional minimization measures, if they are indicated.
- **Work to make sure that the public is kept fully informed of the blasting program and working group discussions as the project advances.** We recommend that the Corps also consider inviting interested members of the public and industry to join the working group. Transparency in this part of the process will be critical given that the DSEIS does not include complete impact information related to rock removal for the project.

Beneficial Reuse

The DSEIS presents the Massachusetts Bay Disposal Site (MBDS) as the preferred method of disposal for the non-rock dredged material. The DSEIS also provides preliminary information regarding the potential beneficial reuse (disposal) of some or all of the parent material to cap areas of the Industrial Waste Site and use of the blasted rock material to create rock reefs. EPA does not object to the disposal of project generated dredged material at the MBDS. And, in general, we support the Corps and Massport investigation of the potential to beneficially reuse a portion of the dredged material generated by the project.

With respect to the plan to cap areas of the former Industrial Waste Site we note that the risk of a fisherman recovering an intact waste barrel to the surface is fairly remote because the area is technically closed to fishing and many of the barrels have already corroded. Therefore we view the proposed capping plan as an opportunity to further reduce the remaining risk.

With respect to the proposal to establish rock reefs, we support the concept of habitat restoration and enhancement; however, we have concerns about the locations selected for reef development and believe that significantly more information needs to be developed to fully understand the potential for impacts from this use proposal. The DSEIS states that reefs encompassing between 186 and 518 acres could be constructed at the Broad Sound or Massachusetts Bay sites. We have concerns about these particular sites due to the large size of the proposed reefs and the habitat functions these areas now appear to perform. The DSEIS describes the geomorphology of Broad Sound site as 43% gravel and cobble and the Massachusetts Bay site as 50% sand waves. The Corps' recent denial of the proposal to place dredged material at Winthrop Beach due to fisheries concerns (including adverse affects on cod spawning and lobsters) and comments highlighting the value of sand waves for fish in comments recently submitted by the National Marine Fisheries Service on the Minerals Management Service's Cape Wind EIS are relevant to this issue. Both of these instances support our position that the Corps and Massport need to more precisely define the potential for impacts associated with the project. As part of this additional evaluation we believe that the impacts associated with a range of reef sizes for both potential sites should be explored in the FEIS.

EPA strongly recommends that the Corps consider establishing a separate working group comprised of federal and state agencies and other interested stakeholders to address issues associated with rock reef creation. As with the blasting issues detailed above, the results of the working group efforts related to rock reef formation should be incorporated into the FEIS for review and comment. As above, we also believe that the information should be provided during the NEPA process, not later during the design phase of the project. At this point, the DSEIS does not contain sufficient information for EPA to determine whether rock reefs will be an acceptable use of the rock material generated by the project.

Acoustic Monitoring System

The FEIS should evaluate the potential for impacts of blasting on the recently installed buoy listening and monitoring system in the Boston shipping lanes.⁴ As you may know, the listening and monitoring system is designed to reduce the likelihood of ships colliding with whales by providing close to real time information to ship captains regarding the presence of whales in the shipping channel. The FEIS should include substantive information, including results of consultation with NOAA, to explain whether any proposed blasting will harm marine mammals and/or the effectiveness of the monitoring system.

In addition, the Corps and Massport should commit to use the data generated by the buoy listening and monitoring system and contract specifications should require that barges and other construction equipment are equipped with the proper communication equipment to receive the updates.

⁴ <http://www.listenforwhales.org/NetCommunity/Page.aspx?pid=467>

Specific comments

DSEIS page 2-25: States that monitoring of the habitat enhancement sites for several years would be important to document colonization rates and provide information for future projects. Yet, there is no commitment in the DSEIS from the Corps or Massport to fund or carry out this monitoring. We believe that if the habitat enhancement (rock reef) efforts advance, the Corps and/or Massport should fund a monitoring plan that is commensurate with the ultimate size of the reefs and is consistent with the input of the working group established to explore this issue (see above).

DSEIS page 3-23: EPA staff have observed European oysters within Boston Harbor along the Winthrop and East Boston shorelines.

DSEIS page 3-83: The DSEIS notes that only transient marine mammals are found in Boston Harbor. We believe that some marine mammals (harbor seals and harbor porpoise) are regular seasonal visitors into the harbor.⁵ Harbor porpoise are routinely observed around the Charles River dam in the spring during anadromous fish inward migration. They have also been observed in Chelsea Creek. Harbor seals have been observed year round throughout the harbor.

The FEIS discusses a change in the size and number of vessels projected to come to the port as a result of the development of the project. The FEIS should calculate the change in water usage (for cooling water intake, ballast, etc.) associated with the projected fleet change.

Cumulative Impacts

The FEIS should look at the cumulative impacts of additional barge traffic to MBDS to the risk of vessel collision with whales. Also, this project will cause a conversion of between 1100-1300 acres of soft-bottom to hard substrate. The FEIS should also analyze the cumulative impact to benthic habitat (from both temporary and permanent conversion) from this project and the large number of other projected projects in the harbor.

Air Quality

General Conformity

EPA disagrees with the approach to general conformity described in the DSEIS which leaves the decision on satisfying the Clean Air Act requirements of general conformity to the design phase of the project (see page 4-51 under “Emission Credits” and page 4-75 under “Mitigation”). We believe that under NEPA the Corps has an obligation to include in the EIS the information about how general conformity requirements will be met. The general conformity provisions at 40 CFR 93.150 mandate that the Corps must make a determination that its action conforms prior to engaging in, supporting, providing financial assistance for, licensing or permitting, or approving it. We believe this requires satisfying conformity prior to issuing a Record of Decision for the project. Therefore, we

⁵ Dave Wiley, PhD, personal communication, 5-16-2008.

strongly encourage the Corps to work closely with the EPA and other state and federal agencies as appropriate to develop an approach to general conformity, in a fashion that can be presented in the FEIS. We believe that leaving a determination on the use or viability of emission credits until the design phase is inappropriate.

The Corps position on its general conformity obligations presented in the DSEIS is unclear and leads to confusion, as evidenced by the statement on page 5-5 under “Environmental Compliance,” which states: “*Clean Air Act, as amended, 42 U.S.C. 7401 et seq. Compliance: The ‘general conformity’ requirements of Section 17[6 sic.] (c)(1) of the Clean Air Act, 42 U.S.C. 7506(c)(1), will be adhered to by limiting construction and using ‘clean’ equipment to avoid exceeding air quality standards [general conformity emission applicability thresholds sic.] or by purchasing emission credits.*”

Should the Corps ultimately adopt either Alternative 1 or 2 with Emission Reduction Option 2 (which includes replacement of older equipment with new equipment⁶ and increased/spread-out dredging schedule⁷) with enforceable environmental commitments that insure the use of new equipment with more stringent EPA emissions standards, and enforceable dredging schedule, then general conformity would be satisfied by the action falling below emission thresholds. However, should the Corps select not to use equipment with more stringent emission standards and/or shorten the construction schedule, then a general conformity analysis is required. Once project emissions exceed the *de minimis* threshold all emissions of the exceeded pollutant would have to be offset or otherwise accounted for in the state implementation plan.

Should an alternative or construction process be chosen that triggers a general conformity analysis (an alternative without emission reduction option # 2), we point out that a draft conformity analysis must undergo a public review process and a final conformity determination issued by the Corps before issuance of the Record of Decision. We are willing to work closely with the Corps to address these issues.

EPA is concerned that the Corps’ has focused more emphasis on efforts to avoid triggering the offset requirements of the general conformity regulations than the need for an analysis of the relative costs and benefits of that avoidance against the other project impacts that may be worsened by stretching the construction schedule out over more years. Those impacts include but are not limited to increased aquatic impacts or

⁶ Replace all non-road equipment with newer equipment that would meet EPA Tier 2, 3 and 4 emission standards that would be required for equipment model years 2011 and beyond. (Page 4-50 and 4-51; “This environmental commitment requires replacing all non-road equipment with newer equipment that would meet EPA Tier 3 and 4 emission standards that would be required for equipment model years 2011 and beyond. The clamshell and backhoe engines would need to meet Tier 4 emissions standards and support equipment would need to comply with Tier 3 and Tier 4 emission standards, depending on the equipment category and engine size. Table 4-12 presents the Tier 3 and Tier 4 emission limits based on engine size, in horsepower. In addition, the tugboats would also have to be equipped with engines that meet EPA’s Tier 2 marine engine emissions standards presented in Table 4-12.”

⁷ Alternative One, 45-Foot MLLW Alternative would increase the dredging six months (from 36 to 42 months) while Alternative 2, 50-Foot MLLW Alternative would increase the dredging four years (from 48 months to 73 months over eight calendar years). Air quality shutdown periods would occur every other winter.

increased costs from multiple re-deployments of equipment. EPA requests that the Corps take a hard look at these comparisons before any final decision is made to avoid one impact at the expense of increasing another. With respect to general conformity, EPA notes that offsets for a time-limited project such as this construction may be supplied using time-limited discrete emission reduction credits. The Agency is aware of at least two recent projects that have successfully secured such credits to offset emissions from construction projects. It is possible that such credits may be available in the open market, and it would be important to weigh the cost of such credits against the potential impacts and costs of an extended schedule. In addition, the analysis in Appendix O of the DSEIS does not appear to explore the option of excluding emissions of ozone precursors that occur outside the ozone season from the conformity analysis. The options for a construction schedule presented in Appendix O, Attachment A, Part 4 suggest that a substantial portion of the construction operations will occur during the winter under most of the options. If the project proponent is prepared to accept enforceable commitments that require a portion of its operations to occur outside the ozone season, those emissions attributable to non-ozone season operations may be excluded from the conformity analysis and reduce the emissions subject to the offset requirement.

Emission Reduction and Mitigation

EPA strongly encourages the Corps to require the use of new non-road equipment that would meet EPA Tier 2, 3 and 4 emission standards. As specified in the DSEIS's "Environmental Commitments," section 4.8.4, page 4-50, the clamshell and backhoe engines would meet Tier 4 emissions standards and support equipment would need to comply with Tier 3 and Tier 4 emission standards, depending on the equipment category and engine size. The DSEIS also notes that tugboats would be equipped with engines that meet EPA's Tier 2 marine engine emissions standards.

EPA recommends including an enforceable commitment in the Record of Decision and specifying this environmental commitment in the contract specifications with enforceable provisions to reduce impacts on air quality, consistent with CEQ's NEPA regulations which require that the Record of Decision include mitigation as conditions in the approvals and funding for the project. 40 CFR 1505.3(a) and (b).

National Ambient Air Quality Standard Nonattainment Areas, and Attainment Areas with an Ongoing Maintenance Plan

The DSEIS identifies the project area as located in the Metropolitan Boston Interstate Air Quality Control Region (AQCR), [40 CFR 81.19]. While this is a true statement, it is more relevant in determining applicable Clean Air Act requirements to indicate that the project is in an area that has been designated nonattainment or is subject to a maintenance plan. The relevant areas for the project are the Boston-Lawrence-Worcester (E. Mass), MA moderate eight-hour ozone nonattainment area and the Boston area carbon monoxide attainment area with an associated maintenance plan.

Table 3-11 & Table O-1 Ambient Air Quality Standards

These tables should be updated to reflect recent revisions to the ozone standard. On March 12, 2008, EPA Administrator Stephen L. Johnson signed the final rule revising the National Ambient Air Quality Standards (NAAQSs) for eight-hour ozone to a level of 0.075 parts per million (ppm), specifying the level of the primary standard to the nearest thousandth ppm. EPA also revised the secondary eight-hour ozone standard by making it identical to the revised primary standard. The Federal Register was published March 27, 2008 (73 FR 16436 — 16514) making the revised eight-hour ozone standards effective on May 27, 2008. NAAQSs can be found on EPA's web site at URL address: <http://www.epa.gov/air/criteria.html>.

Eight-Hour Ozone SIP

Page 3-94 identifies the eight-hour ozone demonstration State Implementation Plan as under development. Please note that the Massachusetts Department of Environmental Protection submitted its eight-hour ozone Reasonable Further Progress (RFP) State Implementation Plan, as well as its eight-hour ozone Attainment Demonstration State Implementation Plan to EPA on January 31, 2008.

General Conformity Regulations

On Tuesday, January 8, 2008, EPA proposed revisions to the general conformity Regulations (73 FR 1402 — 1428). Depending on the timing of the FEIS and the Corps general conformity determination, the Corps may be able to take advantage of the flexibility and benefits offered by a revised final general conformity rule.

CD-ROM disk provided in Attachment B

Page O-11 references a marine vessel MS Excel emissions calculation spreadsheet developed by CDM which was to be included in the CD-ROM disk provided in Attachment B. Our copy of the DSEIS did not include a copy of the CD-ROM. Please submit a copy of the MS Excel spreadsheet for marine vessel emissions to EPA for review.

Page O-14 references a non-road emissions spreadsheet which was to be included in the CD-ROM disk provided in Attachment B. As noted above, our copy of the DSEIS did not include a copy of the CD-ROM. Please submit a copy of the MS Excel spreadsheet for non-road emissions. Page O-14 also references a MS Excel spreadsheet developed by CDM to calculate the on-road annual emissions, which is presented in Attachment A. Please submit a copy of the MS Excel spreadsheet for on-road annual emissions.

Finally, page O-14 references the MOBILE6.2 model input and output files which was to be included on a CD-ROM disk provided in Attachment B. Page O-18 also makes reference to the CD-ROM disk containing MOBILE6.2 input and output files. Because the CD-ROM was not included in our review copy of the DSEIS we respectfully request a copy of all MOBILE6.2 input and output files for review.

We will review the new information contained in the spreadsheets and the CD-ROM and supplement our comments on the DEIS as appropriate based on our review of that information.